

R E M A R K S

Applicant has carefully considered the Office Action of February 27, 2004 rejecting all of the claims.

The Applicant wishes to express his appreciation to the Examiner for the early indication of allowable subject matter. Specifically, the Examiner has indicated that claims 10-17 are allowable, and appropriate amendments to claims 2, 5-8, will place these claims in allowable form.

The present response is intended to fully address all points of objection raised by the Examiner, and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

A new Power of Attorney appointing the undersigned, is attached, together with a change of address form.

Claims 1, 5-6, 8, 10-12, 14 and 16 have been amended. Claims 2-4 have been deleted. Therefore, claims 1, and 5-17 remain in the case.

The present invention discloses an improved apparatus and method for efficiently locking resources connected to multiple processors over a PCI bus or over any other communication means having the same or similar memory cycle characteristics.

Claims 6-8, 10, 12 and 14 have been amended to remove the Sec. 112 rejections indicated by the Examiner. Additional claim amendments have been made to remove typographical errors and to improve clarity.

Claim 1 has been amended to incorporate the recitation of claim 2, and claim 2 has been deleted. Claim 5 has been re-written as an independent claim, incorporating the recitation of claim 1.

The Examiner has rejected claims 1, 3-4, and 9 under Sec. 102(b) as being anticipated by Shagam (US 5,987,550).

The patent to Shagam discloses a lock mechanism for shared resources in a data processing system, and the system is illustrated as having circuitry such as the lock circuit 22 and lock manager 32 (see Fig. 2), lock analyzer 42 of lock circuit 22 (see Fig. 3) and lock comparator 32 of lock manager 32 (see Fig. 4).

The Shagam patent discloses a complex solution for a locking mechanism, requiring a two-step process, namely accessing the lock circuit and then accessing the lock record (col. 9, lines 46-55). This implementation requires additional time to perform the locking and unlocking steps.

By contrast, the present invention provides a simpler solution, and utilizes only a single shared memory 130 (see Fig. 2) to manage the access to the plurality of resources 120-1 to 120-m (see Fig. 1). The recitation of claim 2 highlights this operation by indicating a single read operation is capable of atomically reading at least a collection of said memory elements.

Thus, claim 1 has been amended by incorporating the recitation of claim 2, and claims 3-4 and 9 have been deleted. The single read operation is a simplified technique which cannot be considered to be disclosed by the patent to Shagam. This amendment to claim 1 is in accordance with the Examiner's recognition of allowable subject matter in claim 2.


Similarly, the amendment to claim 5 highlights a single transaction for use of the shared system resource, and this feature is part of amended claim 5, which is now independent by incorporation of the recitation of claim 1. This amendment to claim 5 is in accordance with the Examiner's recognition of allowable subject matter in claim 5.

As stated in the decision in *In Re Marshall*, 198 USPQ 344 (1978), "To constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art...". Since the Shagam reference neither 1) identically describes the invention, nor 2) enables one skilled in the art to practice it, Applicant deems the 102(b) rejection improper, and respectfully requests that it be withdrawn.

Therefore, independent claims 1 and 5 are not anticipated under Sec. 102(b), and are deemed to be patentable, and dependent claims are deemed to be patentable as being based thereon.

In view of the foregoing remarks, all of the claims in the application are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,


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